

REMARKS

Claim 1 has been amended to recite a BET specific surface area of from of from 6.49 m²/g to 7.27 m²/g. Support for amended Claim 1 can be found at, for example, Examples 3 and 4 of the present specification. Entry of this Amendment is respectfully requested, and Claims 1-5, 17 and 18 are pending.

Response to Claim Rejections Under §§ 102 and 103

Claims 1-5 and 17-18 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by or in the alternative, under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent Application Publication No. 20040028601 to Torii. Applicants respectfully traverse.

The barium titanate powder claimed in Claim 1 satisfies the requirements that the ratio c/a is 1.008 or more, the ratio d/D is from 1 to 1.89, the atomic ratio Ba/Ti is from 0.996 to 0.998 and the BET specific surface area is from 6.49 m²/g to 7.27 m²/g.

The presently claimed barium titanate powder which satisfies the requirements of the ratio c/a, the ratio d/D, the atomic ratio Ba/Ti, and the BET specific surface area, provides a sintered body with high density. As shown below, each of the barium titanate powders of Working Examples 3 and 4 has a higher density than that of Example 1, which fails to meet the claimed BET specific surface area requirement.

	c/a	d/D	Ba/Ti	BET	density of sintered body
Example 1	1.0095	1.12	1.000	8.54 m ² /g	5.82 g/cm ³
Example 3	1.0097	1.06	0.998	7.27 m ² /g	5.92 g/cm ³
Example 4	1.0095	1.20	0.997	6.49 m ² /g	5.99 g/cm ³

Torii discloses several calcined BaTiO_3 powders in Tables 1 and 3, which are reproduced below for the Examiner's convenience.

TABLE 1

Calcination Temperature ($^{\circ}\text{C}.$)	Mole ratio A site/B site	Axial ratio c/a	Specific surface area Sw (m^2/g)	Equivalent specific surface diameter D (nm)
non-calcined (dried at $200^{\circ}\text{C}.$)	0.998	1.0000	47.61	21.0
900	0.998	1.0075	7.31	137
950	0.998	1.0082	5.69	176
1000	0.998	1.0088	3.88	258

TABLE 3

Calcination Temperature ($^{\circ}\text{C}.$)	Mole ratio A site/B site	Axial ratio c/a	specific surface area Sw (m^2/g)	Equivalent specific surface diameter D (nm)
non-calcined (dried at $200^{\circ}\text{C}.$)	0.998	1.0000	55.2	18.1
900	0.998	1.0080	7.53	133
950	0.998	1.0092	4.90	204
1000	0.998	1.0098	3.25	308

As shown above, none of the calcined BaTiO_3 powders of Torii have a BET specific surface area within the presently claimed range of from $6.49 \text{ m}^2/\text{g}$ to $7.27 \text{ m}^2/\text{g}$. Thus, Torii fails to disclose or suggest each element of the presently claimed invention. Further, Torii does not disclose or suggest that the properties (e.g., BET specific surface area) of barium titanate powder affects the density of the sintered body.

For at least the above reasons, Torii fails to anticipate or render obvious the present claims. Accordingly, withdrawal of the rejection is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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